

REMARKS

In a first Office Action dated August 12, 2002 (paper no. 4), the Examiner rejected claims 1-4, 7, and 8 under 35 U.S.C. §103(a) as being unpatentable over Dias et al. (U.S. patent no. 6,119,143, hereinafter referred to as “Dias”) in view of Smith (U.S. patent no. 5,835,724). The Examiner rejected claim 5 under 35 U.S.C. §103(a) as being unpatentable over Dias in view of Smith and further in view of Adelman et al. (U.S. patent no. 6,006,259). The Examiner rejected claim 6 under 35 U.S.C. §103(a) as being unpatentable over Dias in view of Smith and further in view of Attanasio et al. (U.S. patent no. 5,918,017) and Fine (U.S. patent no. 4,894,846). The Examiner rejected claim 9 under 35 U.S.C. §103(a) as being unpatentable over Dias in view of Smith and further in view of the applicants’ admitted prior art. The Examiner rejected claims 10-14 under 35 U.S.C. §103(a) as being unpatentable over Dias in view of Smith and further in view of Yu (U.S. patent no. 6,078,943). The Examiner objected to FIGs. 1-4 as lacking the legend “Prior Art.” The rejections and objections are traversed and reconsideration is hereby respectfully requested.

The Examiner rejected claims 1-4, 7, and 8 under 35 U.S.C. §103(a) as being unpatentable over Dias in view of Smith. Specifically, with respect to claim 1, the Examiner stated that Dias teaches a method of load balancing in a communication system network having multiple servers (col. 1, line 18), each of the servers having a load level based on serving a number of clients in the communication system network (col. 4, lines 2-3), the method including steps of grouping the multiple servers into first and second server groups (col. 2, lines 59-61 and col. 3, lines 54-55), wherein the first server group or has load level less than load level of the second server group (col. 5, lines 35-42), calculating a time period T, assigning load to a server (col. 1, lines 23-25) selected from servers in the first server group from an initial time until expiration to the time period T (col. 3, lines 3-5 and col. 3, lines 65-67).- The Examiner acknowledged that Dias does not teach assigning load to a server after time T. However, the Examiner contended that Smith teaches assigning load to a server selected from servers in said first and second

server groups after expiration of said time period T (col. 14, lines 43-47 and col. 15, lines 15-18).

The applicants respectfully disagree with the Examiner's interpretation of Dias and Smith. Dias addresses a problem wherein a source IP address may be associated with multiple clients that are hidden behind that address. As a result, various IP addresses may generate significantly different quantities of requests while each such IP address looks the same to a load distributor. In order to resolve the potential load distribution problem, Dias discloses a method for load balancing by clustering *clients*, or source IP addresses, that source requests to servers, into groups. (See the Abstract; col. 1, lines 22-23; col. 2, lines 59-63; col. 4, line 62, to col. 5, line 17; col. 5, lines 35-42.) After clustering the data sources into groups, Dias then teaches distributing the requests from each data source in a group, that is, from the clients or source IP addresses assigned to a group, among all of the servers in a traditional round robin fashion. (See col. 4, line 62, to col. 5, line 17.) For example, Dias, in column 4, line 62, to column 5, line 17, provides six sources (A, B, C, D, E, and F) and three (or four) servers (1, 2, 3, and 4). The six sources are grouped into two groups, a first tier (A, D) and a second tier (B, C, E, and F). The requests generated by each group, or tier, are then mapped to the servers in a traditional round robin fashion. This is in contrast to claim 1, which provides for grouping of *servers* into multiple server groups and then making load distribution adjustments based on time.

Smith teaches only a single server, that is session server 24. Smith then provides a mechanism for simplifying a retrieval of session data from the server when a client establishes a first connection with the server, session data is retrieved during the first connection, the first connection is terminated, and then the client establishes a second connection with the server. In order to avoid having to again retrieve all of the session data subsequent to the establishment of the second session, Smith teaches the server maintaining the retrieved data for a predetermined period of time after termination of the first connection. Nowhere does Smith or Dias, individually or in combination, teach the limitations of claim 1 of grouping multiple servers into first and second server groups, wherein the first server group has load level less than load level of the second server group, calculating a time period T, assigning load to a server selected from servers in the

first server group from an initial time until expiration to the time period T, and assigning load to a server selected from servers in the first and second server groups after expiration of the time period T. Accordingly, the applicants respectfully request that claim 1 may now be passed to allowance.

Each of claims 2-4 includes limitations of grouping multiple servers into multiple server groups, calculating multiple time periods, assigning load to a server selected from a first server group of the multiple server groups in a first time period, and assigning load to a server selected from the first server group or another server group of the multiple server groups in a subsequent time period. As noted above, none of these limitations are taught by either Smith or Dias, individually or in combination. Accordingly, the applicants respectfully request that claims 2-4 may now be passed to allowance.

Since claims 5-14 depend upon allowable claim 4, the applicants respectfully request that claims 5-14 may now be passed to allowance.

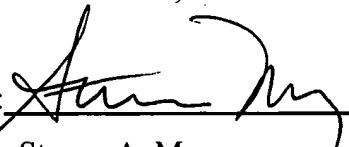
In compliance with the request of the Examiner, the applicants have amended each of FIGs. 1-4 by adding the legend “Prior Art” to the figure. Copies of the amended FIGs. 1-4 are attached hereto with the added legends highlighted in red.

As the applicants have overcome all substantive rejections and objections given by the Examiner and have complied with all requests properly presented by the Examiner, the applicants contend that this Amendment, with the above discussion, overcomes the Examiner’s objections to and rejections of the pending claims. Therefore, the applicants respectfully solicit allowance of the application. If the Examiner is of the opinion that any issues regarding the status of the claims remain after this response, the Examiner is invited to contact the undersigned representative to expedite resolution of the matter.

Respectfully submitted,

David Chen, et al.

By:



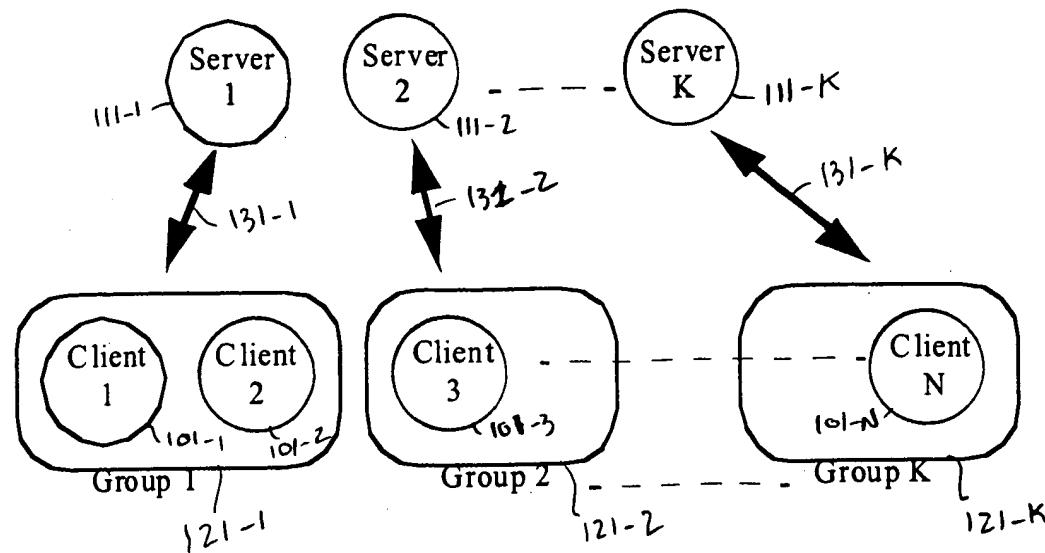
Steven A. May

Attorney for Applicant

Registration No. 44,912

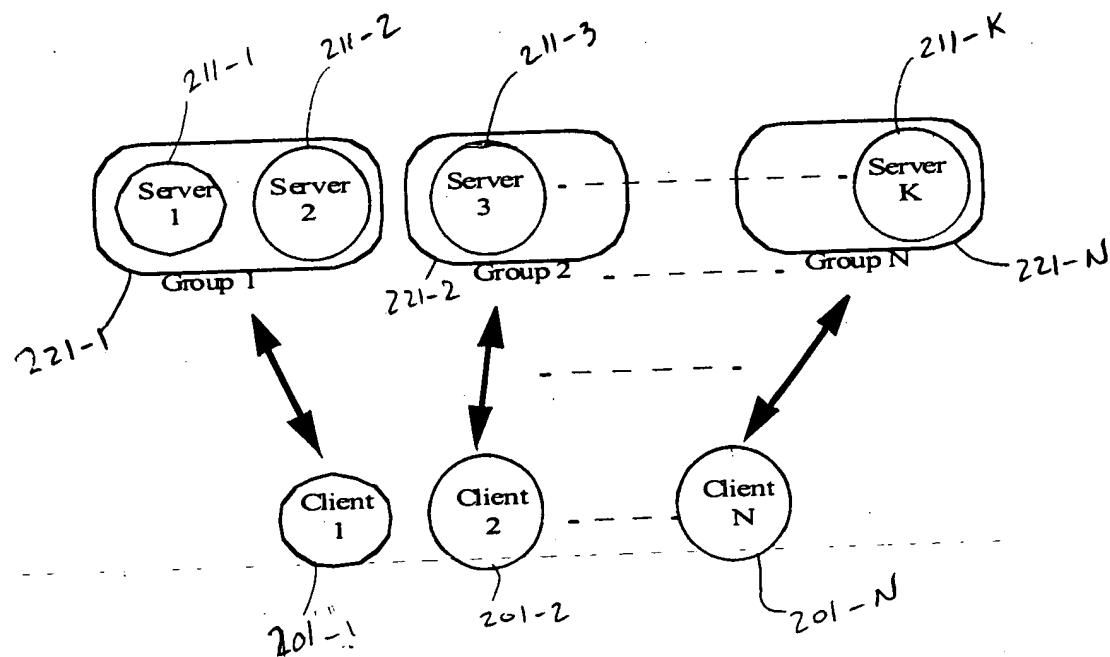
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-PRIOR ART-

FIG. 1



-PRIOR ART-

FIG. 2



a request departs at j

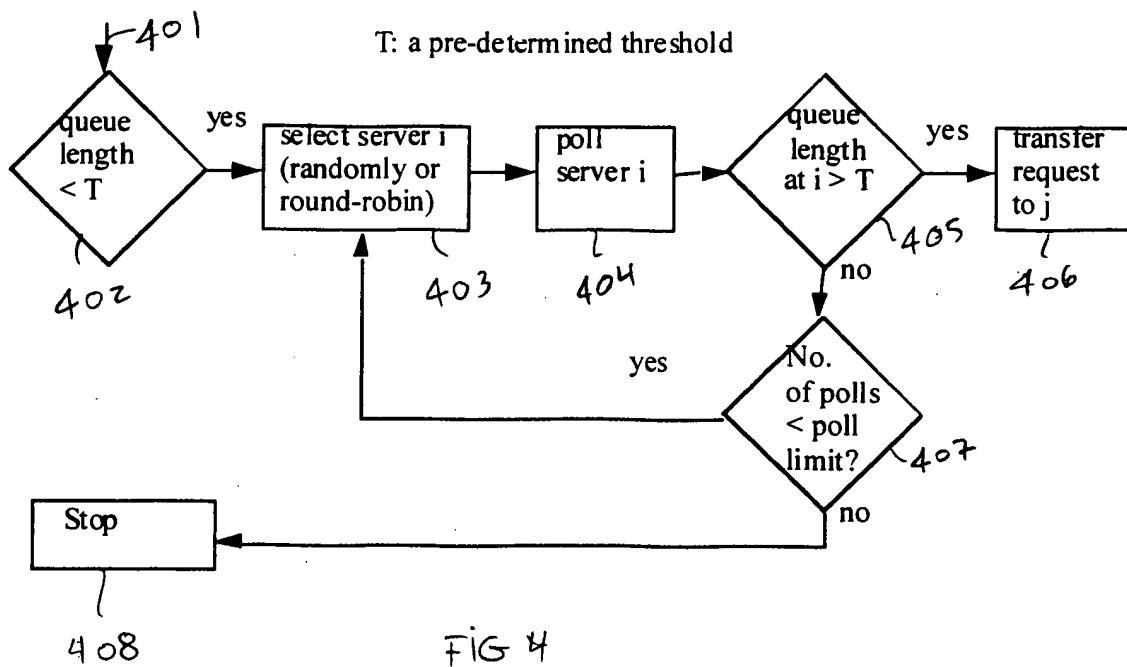
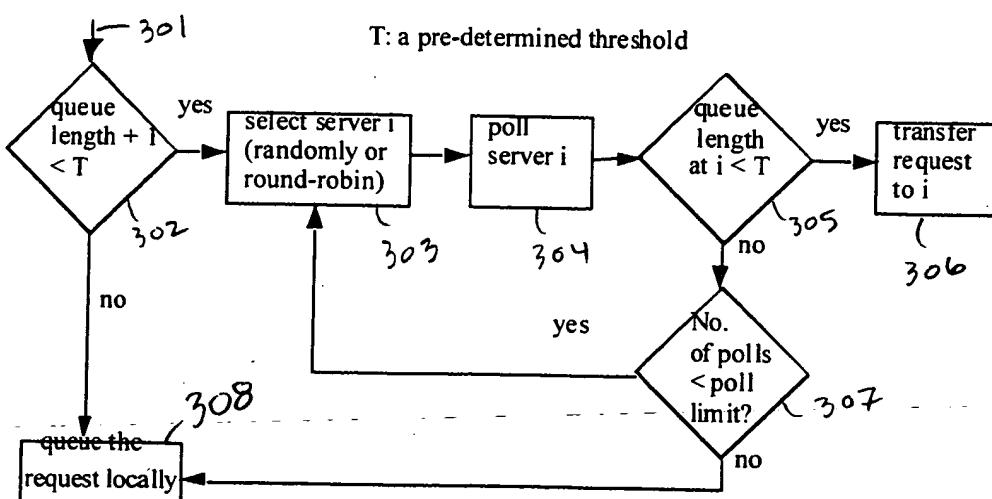


FIG 4

- PRIOR ART -

new requests arrive



- PRIOR ART -

FIG. 3